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EXAMINER

LIANG, GWEN

ART UNIT PAPER NUMBER

2172

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13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/550,451

Applicant(s)

DAVISON, DAN

Examiner

GWEN LIANG

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 21, 23-27, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 21, 23-27, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10, 21, 23-27, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Uppala (U.S. Patent No. 6,279,007).

With respect to claim 1, Uppala discloses a method ...comprising:

forming a first database table having a plurality of entries, each entry representing an object with an associated data to be accessed (See for example: col. 6 lines 46-49, "The invention uses three data structures, shown as database tables in FIGS. 7A, 7B and 7C, to manage hierarchical values: node table 700, hierarchy value table 710 and hierarchy parent table 720."; col. 6 lines 51-60, "For each unique node value, the invention uses a first hashing algorithm to generate a node hash value 705 that identifies a row 701 in the node table 700. The invention assigns a unique node identifier 703 to the node value and stores the node identifier 703, the node hash value 705, and the node value 707 in the row 701 identified by the node hash value 705. In the embodiment shown in FIG. 7A, the node identifiers 703 are stored as binary numbers but a decimal format is used for clarity in explanation."; col. 10 lines 39-46,

"The hierarchical values 717 for the parent and child in each pair are used to retrieve the corresponding hierarchical value identifiers 713 (block 948), referring again to the description of FIG. 9D, and a row 721 is stored in the hierarchy parent table 720 for each parent-child pair (block 953). The data warehouse manager 811 continues to expand hierarchical values into parent-child pairs until no unique parent child pairs remain to be processed.", wherein the data stored in the table are accessed; and also see Fig. 11A); and

forming a second database table having a plurality of entries, each entry defining a relationship between said plurality of objects, wherein each entry is associated with at least one of the multiple hierarchies (See for example: FIG. 7B, wherein relationships such as 1001-1002 and 1001-1003 are defined.).

Claim 2 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Uppala discloses a method wherein each of said plurality of relationships is defined between a pair of said objects (See for example: FIG. 7B.).

Claim 3 is rejected for the reasons set forth hereinabove for claim 2 and furthermore Uppala discloses a method wherein said relationship is between a parent and a child (See for example: FIGs. 6 and 7B.).

Claim 4 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Uppala discloses a method wherein said plurality of relationships include single parent and multiple parent hierarchies (See for example: FIGs 6 and 7B.).

Claim 5 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Uppala discloses a method wherein said plurality of relationships include tree type structures (See for example: FIG. 6).

Claim 6 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Uppala discloses a method comprising forming a third database table, said third database table having a plurality of entries, each entry being a summary of said data from a plurality of entries from said first database table (See for example: FIG. 7C.).

Claim 7 is rejected for the reasons set forth hereinabove for claim 5 and furthermore Uppala discloses a method wherein each entry in said second database table defines a relationship between a pair of said objects (See for example: FIG. 7B.).

Claim 8 is rejected for the reasons set forth hereinabove for claim 7 and furthermore Uppala discloses a method wherein said relationship is between a parent and a child (See for example: FIGs. 6 and 7B.).

Claim 9 is rejected for the reasons set forth hereinabove for claim 8 and furthermore Uppala discloses a method wherein each entry in said second database table further defines a direct or indirect parent-child relationship (See for example: FIGs 6 and 7B)

Claim 10 is rejected for the reasons set forth hereinabove for claim 8 and furthermore Uppala discloses a method wherein each entry in said second database table further comprises a definition of a database structure to which said relationship is a part thereof (See for example: FIGs 7B, 7C, 11B and 11C.).

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With respect to claim 21, Uppala discloses a method ... comprising:

forming a table of members available in the multiple simultaneous hierarchical database relationships and data to be accessed associated with each member (See for example: col. 6 lines 46-49; col. 10 lines 39-46); and

forming a table of reporting relationships among the members available in the multiple simultaneous hierarchical database relationships (See for example: FIG. 7B, wherein relationships such as 1001-1002 and 1001-1003 are defined.); and

forming a table having a set of hierarchies, each hierarchy corresponding to a reporting relationship in said table of reporting relationships (See for example: Fig. 10, Fig. 11A and Fig. 11B, wherein each hierarchy corresponds to a reporting relationship, such as .Topics/Sports and Topics/Arts/Music; and also FIGs. 7C and 11C.).

With respect to claim 23, Uppala discloses a method ... comprising:

creating a first table, including the plurality of objects and associated data to be accessed, wherein the first table associates each of the plurality of objects with an object identifier (See for example: Fig. 7A, wherein each object is identified by a Node ID; col. 10 lines 39-46); and

creating a second table, wherein each parent-child relationship is represented by associating the object identifier of each parent object with the object identifier of each related child object and indicating that each parent-child relationship is associated with the first hierarchical relationship, so that multiple simultaneous hierarchies can defined using the relational data structure without needing dedicated database relationships between objects in the multiple hierarchies (See for example: Fig. 7B, wherein the

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parent-child object relationship is identified in the column Hierarchical Value and is associated with a hierarchy identified by Hierarchical Value ID, wherein simultaneous hierarchies such as A/B/C and A/C can be defined using the relational data structure.).

Claim 24 is rejected for the reasons set forth hereinabove for claim 23 and furthermore Uppala discloses a method wherein the second hierarchical relationship is defined by:

creating at least one different parent-child relationship than is present in the first hierarchical relationship; and indicating that the different parent-child relationship is linked to the second hierarchical structure (See for example: FIGs. 6 and 7B, 1001 (A)-1002 (B)-1003 (C)-1004 (D) and 1001 (A)-1002 (B)-1004 (D))

Claim 25 is rejected for the reasons set forth hereinabove for claim 24 and furthermore Uppala discloses a method comprising creating a third table, wherein the third table includes a summary of the first and second hierarchies (See for example: FIG. 7C.).

Claim 26 is rejected for the reasons set forth hereinabove for claim 24 and furthermore Uppala discloses a method comprising retrieving data associated with at least one of the plurality of objects in a single round trip (See for example: col. 12 line 59 – col. 13 line 19).

Claim 27 is rejected for the reasons set forth hereinabove for claim 23 and furthermore Uppala discloses a method comprising indicating whether each parent-child relationship is direct or indirect (See for example: FIGs 6 and 7B).

With respect to claim 31, Uppala discloses a relational data structure
...comprising:

a first table for:

organizing a plurality of objects, wherein each object is related to at least one other object by a defined relationship (See for example FIG. 7B, wherein relationships such as 1001-1002 and 1001-1003 are defined) ; and

storing an object identifier associated with each of the plurality of objects (See for example: FIG.7A, wherein Node ID is equivalent to an object identifier.);
and

storing associated data to be accessed for each object identifier (See for example: Fig. 7A and 7B; col. 10 lines 39-46), and

a second table for:

associating the object identifier of each of the plurality of objects with the object identifier of each related object to represent each defined relationship (See for example: Fig. 7B, wherein the parent-child object relationship is identified in the column Hierarchical Value and is associated with a hierarchy identified by Hierarchical Value ID, wherein simultaneous hierarchies such as A/B/C and A/C can be defined using the relational data structure.); and

storing a hierarchy identifier associated with each relationship for indicating that each relationship is associated with a particular one of the multiple hierarchies (See for example: FIG.7B, wherein a Hierarchical Value ID such as 10007 serves as a hierarchy identifier in identifying a particular relationship of 1001-1003.).

Claim 32 is rejected for the reasons set forth hereinabove for claim 31 and furthermore Uppala discloses a data structure comprising a third table for storing a summary of each of the multiple hierarchies (See for example: FIG. 7C.).

Response to Arguments

3. Applicant's arguments regarding claims 1, 21, 23 and 31 filed on 2/21/2003 have been fully considered but they are not persuasive.

As per applicant's arguments regarding " ... nowhere does Uppala teach or suggest a hierarchical structure that actually contains the data to be accessed" have been considered but they are not persuasive. The Examiner maintains that the Uppala reference teaches a hierarchical structure that contains the data to be accessed.

Firstly, as stated in the previous Advisory Action, in the Uppala reference, FIG. 7A can be used as an example to illustrate that the data associated with the entry is stored in the column labeled as "Node Value". For example, data "A" is associated with the entry identified by Node ID 1001, and data "B" is associated with the entry identified by Node ID 1002. Another figure, FIG. 11A, of the same data structure provides a more clear illustration of the data association of each entry in a database table, wherein "Topic" is the data associated with the entry of Node ID 1001 and "Sports" is the data associated with the entry of Node ID 1002. "Data" is defined as "an item of information" (Microsoft Computer Dictionary, fifth edition page 141). Both "Topic" and "Sports" are data based on the definition in Microsoft Computer Dictionary. Therefore, the Uppala reference does teach the feature of "forming a ... database table ..., each entry representing an object with an associated data" as claimed in the applicant's invention.

Secondly, as stated in the Applicant's Remarks in Request for Reconsideration of RCE filed on 2/21/2003 in paper number 12, at Col. 9, lines 1-11, Uppala teaches that the data warehouse contains data that can be accessed through hierarchical value identifiers. In order for the data stored in the data warehouse to be retrieved, it is inherent that the data stored in the identifying tables need to be read or accessed first. "Access" is defined as "to gain entry to memory in order to read or write data" (Microsoft Computer Dictionary, fifth edition page 13).

Therefore, the Uppala reference does teach the feature of "forming a ... database table ..., each entry representing an object with an associated data to be accessed" as claimed in the applicant's invention.

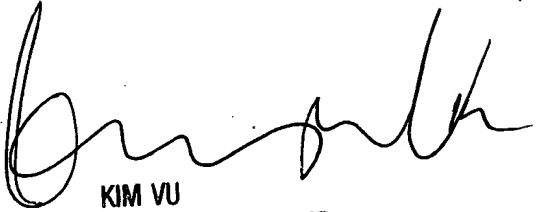
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 703-305-3985. The examiner can normally be reached on 9:00 A.M. - 5:30 P.M. Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM VU can be reached on (703) 305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

G.L.
April 23, 2003


KIM VU
SUPERVISORY PATENT EXAMINER
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